## Claims

1. A method of sensing the spatial position of an object, comprising a mounting step, in which three light sources (2, 3, 4, 5, 6) are mounted on the object so as to define a triangle,
an activating step, in which the light sources (2, 3, 4, 5, 6) are turned on,
a recording step, in which the object is simultaneously recorded from first and second positions with turned-on light sources (2, 3, 4),
as well as an evaluating step, in which the positions of the light sources (2, 3, 4) in the recorded images are determined and the position of the object is computed on the basis of the determined positions of the light sources (2, 3, 4).

2. The method as claimed in Claim 1, wherein the images of the turned-on light sources (2, 3, 4) are separated from the remaining image background in order to determine the positions of the light sources.

3. The method as claimed in Claim 1 or 2, wherein the light sources (2, 3, 4) are turned off prior to the evaluating step and the object is recorded, while the light sources (2, 3, 4) are turned off, from the first and second positions at the same time, with the image recorded while the light sources (2, 3, 4) were turned off being subtracted from the image recorded while the light sources (2, 3, 4) were turned on in the evaluating step, in order to determine the positions of the light sources for each recording position.

4. The method as claimed in any one of the above Claims, wherein, in the mounting step, more than three light sources are mounted on the object, of which only three light sources are turned on during each activating step.

5. The method as claimed in Claim 4, wherein those three light sources (2, 3, 4) which form the largest triangle that can be recorded from both positions are turned on in the activating step.

6. The method as claimed in any one of the above Claims, wherein the light sources (2, 3, 4) are operated in a pulsed manner.

7. The method as claimed in Claim 6, whererin the simultaneous recordings from both positions are effected in a manner synchronized with the pulsed light sources so as to alternatively obtain a pair of recorded images with turned-on light sources and a pair of

recorded images with turned-off light sources, with the light source positions being determined on the basis of two subsequent pairs of recorded images in the evaluating step.

8. The method as claimed in any one of the above Claims, wherein the light sources (2, 3, 4) are individually turned on and recorded, one after the other, in order to identify the light sources (2, 3, 4).

9. The method as claimed in any one of the above Claims, wherein the light sources (2, 3, 4) are controlled in a wireless manner.

10. A device for sensing the spatial position of an object, said device comprising
three light sources (2, 3, 4) which can be mounted on the object and, in the mounted condition, define a triangle,
two spaced apart image-recording devices (10, 11), whose image-recording areas (12, 13) overlap,
a control device (14) which causes the light sources (2, 3, 4) to be turned on and the object to be recorded with turned-on light sources (2, 3, 4) by both image-recording devices (10, 11) at the same time,
as well as an evaluating unit (22), which determines the positions of the light sources (2, 3, 4) in the recorded images and computes the position of the object on the basis of the determined positions of the light sources (2, 3, 4).

11. The device as claimed in Claim 10, wherein the evaluating unit (22) separates the images of the light sources (2, 3, 4) from the remaining image background in order to determine the positions of the light sources.

12. The device as claimed in Claim 10 or 11, wherein the control device (14) causes the light sources (2, 3, 4) to be turned off and the object to be recorded, with the light sources (2, 3, 4) turned off, by both image-recording devices (10, 11) at the same time, with the evaluating unit (22) subtracting the image recorded with the turned-off light sources (2, 3, 4) from the image recorded with the turned-on light sources (2, 3, 4), in order to determine the positions of the light sources for each image-recording device (10, 11).

13. The device as claimed in any one of Claims 10 to 12, wherein a control unit (8) is provided, which is connected with the light sources (2, 3, 4) and controls the light sources (2, 3, 4) on the basis of signals wirelessly transmitted by the control device (14), wherein, in particular, a current or voltage source (20), respectively, is also provided for the light sources (2, 3, 4).

14. The device as claimed in any one of Claims 10 to 13, wherein light emitting diodes, in particular infrared-light emitting diodes, are employed as light sources (2, 3, 4).

15. The device as claimed in any one of Claims 10 to 14, wherein the object comprises a display unit (9) that can be mounted on the viewer's head and, in the mounted condition, can generate an image which is perceivable by the viewer.

16. The device as claimed in any one of Claims 10 to 15, wherein the light sources (2, 3, 4) are connected with the object in a stationary manner.

17. The device as claimed in any one of Claims 10 to 16, wherein the light sources (2, 3, 4) comprise a pre-determined emission spectrum and the recording devices (10, 11) only pick up light having the pre-determined emission spectrum, wherein, in particular, a filter is provided for each of the recording devices (10, 11), said filter allowing light to pass only if it has the pre-determined emission spectrum.